



The LongPath

A North Alabama DX Club Publication

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How to Join

- * Come to a club meeting;
- * or send in an application by mail (form on www.NADXC.org)
- * or call Tom Duncan at (256)705-2147

November Program

By Steve Werner, AG4W

Many of us talk about Beverages, and N4BCD and AG4W actually did something about it in their separate ways. Read Mark's article in this LongPath edition, and on Tuesday, hear Steve tell not just about Beverages in general, but some history and a modification he made using age-old technology which improves performance. Get to Ryan's around 6:00 pm for dinner, 7:00 for the business

From the President

By Mark Brown, N4BCD

Last month I wrote about beginning a Beverage construction project. It was finished a few weeks ago and I hope you enjoy the write-up further into this issue. One thing already apparent... now I can hear stations I can't work. This column is a little short due to the time spent writing – and some fruitless DX chasing.

How do you spell frustration? For me frustration is spelled FT4TA. Despite hours in the chair calling somewhere 5 to 20 up I've yet to break the pile-ups. I'm not giving up.

Please have a close look at the published meeting minutes & proposed budget. At the November meeting we'll be voting on next year's slate of officers (including any nominations from the floor) and the fiscal year budget.

Our December meeting will be at Terranova's (same shopping strip as Gigaparts) for our annual Christmas party. Looking forward to a good turnout of members & spouses.

73,

Mark

News Flash—New Transceiver Feature

Reprinted with Permission from November 6, 2014 Daily DX

It is not well known but for many years the major manufacturers of HF transceivers, have quietly fitted them with a special circuit that would cause your transceiver to internally combust should you use it to exhibit poor operating practices. Like maintaining a nuclear deterrent, they have always lived in hope that they would never be forced to activate this circuit. However manufacturers have been concerned for some time with the poor behaviour of many operators when using their equipment and what they have heard during the current Tro-

melin Island DXpedition has forced them to act. Therefore on 0000z Saturday 15 November 2014 a coded message will be sent to all transceivers they have sold activating this circuit.

Once activated your transceiver will internally combust if you undertake any of the following:

- a) Calling when the DX station is transmitting something other than your callsign – it can

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meeting, and 7:30 or a little after (this is the once-postponed annual meeting) for Steve's program.

News Flash

(cont'd from the front page)

- sense the DX station's signal and what is sent
- b) Calling when you can't hear the DX station - it can also sense when the DX station's signal cannot be heard
- c) Tuning up on the DX station's frequency - if you send a tone for more than 50ms and the radio senses another signal on the frequency
- d) Sending or saying "up" or "down" on a frequency occupied by another signal
- e) Sending strings of dits or dahs, using profane language, going "ah ah ah" or broadcasting music or anything else recorded

- f) Calling if the DX op is asking for a region other than yours - the circuit can sense which region you reside in (Note only works if you are in NA/JA/EU)

This list is not exhaustive and can be remotely adapted as poor operating practices change.

It has also been acknowledged there is a risk that people will blow up their rigs simply because they inadvertently forgot to put the split button in. Therefore the manufacturers are prepared at their cost to install a big flashing red light on top of your rig as a visual re-

minder but of course the risk of detonation remains with you. It should also go without saying but any attempt to remove the circuit will cause the rig to explode.

On a more positive note it appears manufacturers are also jointly working on a new innovation for your transceiver to transmit a signal which blows up plasma TVs within a one mile radius of your house. This is expected to be a sure fire sales winner.

Elecraft P3 Panadaptor Review

Jim Spikes, N4KH

Earlier this year, I finally pulled the trigger on acquiring a P3 Panadaptor for my Elecraft K3 transceiver.

If you do even occasional contesting or DXing, a panadAPTER can be a very valuable tool. Panadapters are great for monitoring for openings on the higher frequency bands such as 10 and 6 meters, spotting a DX pileup, or finding those widely dispersed weak signals on a band that is just opening or closing.

The P3 is a standalone unit (no computer required) designed to work with the K3. However, it can be used with other radios, provided they have an IF output port between 455 kHz to 21.7 MHz. There are two cables needed for basic operation; IF input and 12 volt power. I opted for the kit version which was easy to assemble in a few hours. No soldering required.

Typically, you will want the display to be split to provide the spectrum display at the top, and waterfall graphics at the bottom. The waterfall height is adjustable via the menu settings, or can be turned off if desired. The spectrum display provides the ability to see where signals are on the band in real time, along with their strength and width, while the waterfall shows you where signals have been. A signal will scroll off the bottom of the waterfall after about 8 to 10 seconds.

The frequency span can be adjusted between 2kHz and 200kHz. I seldom use settings wider than 50 or 75 kHz, and find 5, 10 or 25 kHz the most useful in many cases. The function (FN) keys across the bottom of the unit are user-programmable for quick access to frequently used functions. I have several set to my preferred span settings. There are also two display markers (A and B) which can be set to a desired frequency using the control knob.

As an example of real world operation, I snapped the above photo during the excellent 6 meter band opening on June 22. The signals on the far left are mostly CW beacons. Toward the center are

active CW stations and carriers, and the wide signals on the far right are SSB stations. The wide green marker in the center is the K3 VFO frequency (50.100.5). You may note there are two signals in the DX window of the band, between the VFO frequency and the white Marker B cursor I have set to 50.125. The waterfall also shows a trace for a SSB station that had just finished a short transmission in the DX window. With this setup, I was able to work stateside stations up and down the band while watching for activity in the DX window.

In a contest, a panadAPTER gives you a "picture" of the activity on a band. You can quickly spot a clear frequency to set up shop for "running" stations, or use the display to assist in moving from station to station in search and pounce mode.

When chasing a juicy DX station that is operating split, you can usually tell where the DX is listening just by watching for the signals of the stations successfully working the DX, giving you an advantage over those operating in the blind. If the DX is moving his receiver

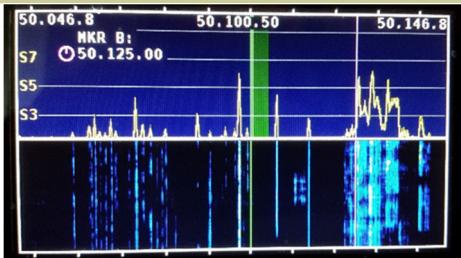


Elecraft P3 Panadaptor Review

(cont'd from p. 2)

between contacts, his tuning pattern will often become apparent (e.g. top to bottom of the pileup). If the DX is tuning in a random fashion, you might choose an open or less crowded spot in the pileup to make your call. With a little patience, you can have a high rate of success in busting pileups even at low power levels.

There are other features, advantages and tricks for using a panadaptor that I haven't mentioned here. The bottom



line is a panadaptor makes your time on the air more effective and fun. I wouldn't want to be without one now.

See you on the bands!

The LongPath Staff

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Chuck Lewis, N4NM, DX Contests

Bill Bathgate, KD8IGK, Minutes

Mark Brown, N4BCD, From the President

Building a Beverage

By Mark Brown, N4BCD

Having read and heard first-hand accounts of the benefits of RX-only antennas, and having experienced the frustration of hearing 75m contacts made to DX stations buried in the noise, I resolved to build a Beverage antenna for this year's contest & DX season.

A few years ago I built a RX loop antenna per ON4UN's book but was disappointed at the marginal S/N improvement over my 80m dipole at 50'. It was a vertically oriented rectangle with a termination resistor on one vertical side and a crude matching transformer on the other vertical side. With the bottom leg about 5' off the ground and a pre-amp the results were not worth the effort.

Back to the Beverage. Simple recipe. A wire 1 to 2 wavelengths long & no more than 0.5 wavelengths above ground. I wanted single direction coverage on this first iteration because I want Europe. I need Europe. I need the concentration of hams in Europe to move from 45 LOTW confirmations to 100 for 5 band DXCC.

Lots of walks and lawnmower sessions across the 5 acre property ruled out a



A 4 x 6 x 12' treated post sunk 2' into the ground is used for the termination point.



A 4 x 4 x 12' treated post was used at the feedpoint.

lot a places. The pasture where Julie rides her horse was out. Areas under power lines were obviously discounted. I finally settled on the front yard as being the least intrusive place to aim a 60 degree beamwidth antenna somewhere between 30 & 40 degrees NNE.

Construction.

The first phase was simple grunt work with a post hole digger for two 24" deep holes for the end posts. Temporary T-posts and ratcheting tie-downs kept them vertical for the concrete pour.

Design refinement.

Julie saw where the wire was going and said "But I ride my horse here too". The upper height limit for an 80m Beverage ($80m \times 0.05WL$) is 13.1 feet and on 40m it's 6.5 feet. While lower would be

better for receiving signals, lower would also cause me to receive complaints from a helmeted rider so the ends will be (horse + rider + wire sag = 120 inches (10 feet) off the ground. Actually horse + rider = 90" so I allowed for about 30" of wire sag (plus cantering horse & uneven terrain).

An online calculator for catenary sag predicted that for a 300' span the wire would need to be tensioned to over 300 lbs to keep sag less than the limit, but adding a middle post reduced that tension to a much more reasonable 75 lbs.

The center post was a simple T-post with a piece of 2" PVC reaching to 10' I chose an antique pole insulator with a

Building a Beverage

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knotted loop of wire to allow the antenna wire to slip.

Construction continued.

Considering that a 10' post might bend over time I chose a 4x6 x 12' post closest to the road and a 4x4 x 10' post for the less visible end. Three 60 lb bags of cement on a cloudless fall weekend, with breaks to see if W1AW/4 AL was on the air, secured the posts into the holes.

I reasoned that a two terminal passive component needs weather protection (IP41) but not weatherproofing (IP65 or greater) so the termination resistor box was installed in a simple plastic conduit box from Lowes. A barrier strip for easy resistor replacement and #6 stainless hardware complete the assembly. For the feed end an IP67 box was found at Lowes for about \$6. Radio Shack barrier strips & perf board provided a means of mounting the transformer.

The transformer and winding followed the recommendations of W8JI and other web sources. A FAIR-RITE 2873000202 binocular core is available from Newark # 02E8908 @ \$0.36 each. Per W8JI: "These cores require a two-turn 50-75 ohm winding. The high-impedance winding is 5 turns for 75-ohm cables (6.25:1 Z ratio) or 6 turns for 50-ohm cables (9:1 Z ratio)."

Since this wire will extend diagonally across the front yard I wanted the wire to be as close to invisible as possible. A spool of 17 gauge aluminum fence wire from Tractor Supply was used. Terminations at both ends are made into crimped tinned spade lugs. Time will tell if oxidation becomes a problem. Insulators are the screw-in porcelain type also from Tractor Supply with a few small ones from the junk box to route the wire down the post.

2" PVC pipe topped by an antique insulator and supported by a T-post provides support in the middle of the 300' span.



The completed matching transformer box mounted and connected.

With just a few days to go before CQWWSSB and usable daylight in short supply after work hours, I started rushing to complete the details.

The feedline was routed across the lawn about 30' to the corner of the house then follows the foundation around to my shack entry window. A convenient expansion joint between the driveway and garage serves to protect & hide the Comscope 75 ohm CATV coax. The feedline was connected to the matching transformer (without antenna) and the radio. Comparing RX levels with a dummy load I was gratified to hear absolutely zero common mode noise.



The completed termination boxes before mounting.



Broken termination box.



DX Contests for November

By Chuck Lewis, N4NM

WAE DX Contest (DIG), 80-10 meters

Nov. 8, 0000Z to Nov. 9, 2400Z

Exchange: RST plus serial number
(see rules for QTC)

See page 86, Nov. QST and
www.waedc.de

Japan Int'l DX Contest, (SSB), 80-10 meters

Nov. 8, 0700Z to Nov. 9, 1300Z (48 hours)

Exchange: RS plus CQ zone; JAs send prefecture

See page 86, Nov. QST and
www.jidx.org

OK/OM DX Contest, CW, 160-10 meters

Nov. 8, 1200Z to Nov. 9, 1200Z

Exchange: RST plus serial number or
OK/OM district

See page 86, Nov. QST and
www.okomdx.crk.cz

LZ DX Contest, (CW/SSB), 80-10 meters

Nov. 15, 1200Z to Nov. 16, 1200Z

Exchange: RST plus ITU zone or LZ
district

See page 86, Nov. QST and
www.lzdx.bfra.org

Russian WW Multimode Contest, (CW/ SSB/DIG), 160-10 meters

Nov. 15, 1200Z to Nov. 16, 1159Z

Exchange: RST & Serial or 2-
character Oblast #

See page 86, Nov. QST or
www.rdrclub.org

All Austria 160 Meter Contest, (CW), 160 meters

Nov. 15, 1600Z to Nov. 16, 0700Z

Exchange: RST plus Serial Nr. (OEs
send district)

See: page 86, Nov. QST and
www.oevsv.at

ARS HF Contest, (CW/SSB/DIG), 160-6 meters

Nov. 16, 0000Z to Nov. 16, 2359Z

Exchange: RST plus serial #



CQ Worldwide CW, (CW), 160-10 meters

Nov. 29, 0000Z to Nov. 30, 2359Z

Exchange: RST plus CQ zone

See page 86, Oct. QST and
www.cqww.com

ARRL 160 Meter Contest, (CW), 160 meters

Dec. 5, 2200Z to Dec. 7, 1600Z

Exchange: RST plus Section

See: www.arrl.org/160-meter

ARRL Ten Meter Contest, (SSB/CW), 10 meters

Dec. 13, 0000Z to Dec. 14, 2259Z

Exchange: RST plus State/ Prov.; DX
sends RST + S.N.

See: www.arrl.org/10-meter

OTHERS:

Run for the Bacon,

0200Z – 0400Z, Nov 17

Ten Meter RTTY Contest,
0000Z – 2400Z, Dec 7

Dates & times often change or are misprinted in the journals; beware. Have fun!

Chuck, N4NM

Beverage

(cont'd from page 4)

Results.

In CQWWSSB most activity seemed to follow the high bands so there wasn't as much 80m activity as hoped. Still, it was immediately clear that the Beverage was hearing signals that could not be heard on the doublet. My LOTW account went from 45 to 58 in one contest weekend.

As the contest & DX season continue, I'm optimistic that the confirmed count will continue to grow.

NADXC Officers and Directors

President	Mark Brown, N4BCD
Vice President	Warren Alford, KJ4RAQ
Secretary/ Treasurer	Bill Bathgate, KD8IGK
At-large directors	Chuck Lewis, N4NM Tom Duncan, KG4CUY Kevin Hibbs, KG4TEI

2015 NADXC Budget Proposal
By Bill Bathgate, KD8IGK, Treasurer

Item #	Description	Bank Balance	Income	Expenses
1	Current Bank Account Balance 11/1/2014	\$3,816		
2	Dues receipts (estimated 31 members x \$15.00 each)	\$4,281	\$465	
3	Spectrum Defense Contribution- ARRL	\$4,181		\$100
4	Annual Club Picnic (shelter rental Monte Sano)	\$4,106		\$75
5	Young Ham of the Year Award - Plaque	\$4,056		\$50
6	Repeater Power Bill	\$3,976		\$80
7	Annual Web Hosting & Domain Service	\$3,901		\$75
8	DX Expedition Sponsorship	\$3,501		\$400
9	Miscellaneous Expenses	\$3,401		\$100
10	Annual DX Club Banquette Receipts (70 Tickets)	\$6,101	\$2,700	
11	Annual DX Club Banquette Expenses (based on 2014)	\$3,901		\$2,200
	Final Bank Balance Summary	\$3,901	\$3,165	\$3,080
	Net Difference in bank balance	\$85		

October Meeting Minutes
By Bill Bathgate, KD8IGK, Treasurer

1. The October 14 meeting began around 6PM at Ryan's Steak House with folks gathering for dinner. There were 16 members and 1 guest in attendance. Mark N4BCD solicited feedback on the W1AW/4 activation and most members had signed up for slots in the schedule for this very rare and fun event. We will all be here for the next opportunity in 2114? Probably not but our great grandchildren might be!

2. In our prior meeting Johnny KR4F reported that Scotty Neusteder W4WW passed away. Scotty was a past Hamfest Chairman, Field Day Chairman, and active club member. It is interesting that not long after this announcement I have caught a spammer reusing his call sign in emails sent to the NADXC.ORG mail server. If you should get any spam from this call sign please let me know because our hosting provider is tracking this for us.

3. Sadly it was announced that Steve Roberts N0SR is now a silent key.

4. We had our annual picnic at Monte Sano on Sunday Oct 12. A fun time was had by all even though shortly after we began to eat the sky opened up and it turned into a heavy downpour.

5. Chuck Lewis has informed us that he is retiring from his role on the board. Based on that information it was recommended that we reduce our governance function by one member, a motion was moved by Tom Duncan, and seconded by Bill Bathgate. On a vote of the members present the motioned was passed.

6. The nominating committee has announced that the 2014 officers have agreed to serve in 2015 in their current positions. There were no further nominations from the floor.

7. We have been considering sponsorship of a DX Expedition this year. Several candidates in consideration are FT4TA Tromelin Island and Heard Island as examples. It was delegated to Tom Duncan & Steve Werner to narrow down the list for the next meeting.

8. It was announced moved by Bill Bathgate KD8IGK that we need to renew our web page hosting package since our current term will expire in December. This was seconded by Johnny Winter KR4F. Total cost for a renewal of 1 year of \$59.40.

9. Our program for the month was presented by two members; Tim Wininger AB4B presented a talk on "DX'ers and Contesters". It was interesting to appreciate that the role of Contesters and DX'ers are merging at a rapid rate. They have similar traits: a competitive nature, patience and dedication. The second part of the program by Craig Behrens NM4T showed us some new battery technologies and light sources for field work. It is amazing to see the huge difference in size and weight these devices from just a few years ago.

10. We have one new single member, Charles Dockery, N7UQ and one new family membership, Dan Whitsett, WB4RE and XYL this month.

11. Current Bank Balance.

Beginning Balance 9/2...	\$ 3,902.84
Deposits	\$ 00.00
Withdrawal	\$ 59.40
Ending Balance	\$ 3,815.67